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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,018	12/05/2003	David Miller	ACUFO.002DV2	8812

20995 7590 06/22/2004

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EXAMINER	
SCHWARTZ, JORDAN MARC	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/729,018	MILLER ET AL.	
	Examiner	Art Unit	
	Jordan M. Schwartz	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Peri d f r R ply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-24,26-44 and 46-60* is/are rejected.

7)☒ Claim(s) *3,25,45 and 61* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 37, 41 and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 37 (with a similar rejection to claim 41), applicant is claiming "wherein the bio-compatible material" however, claim 24 from which claim 37 depends has not claimed that the method comprises a bio-compatible material. It is not clear as to what part of the lens comprises the bio-compatible material and possibly the dependency of claim 37 is incorrect rendering the claim vague and indefinite. Furthermore, if applicant amends the dependency of claims 37 and/or 41 it is suggested that the claims be reviewed carefully to avoid duplicate claims.

With respect to claim 55, applicant is claiming "wherein the bio-compatible material" however, claim 44 from which claim 55 depends has not claimed that the ophthalmic lens comprises a bio-compatible material. It is not clear as to what part of the lens comprises the bio-compatible material and possibly the dependency of claim 55 is incorrect rendering the claim vague and indefinite. Furthermore, if applicant amends the dependency of claim 55 it is suggested that the claims be reviewed carefully to avoid duplicate claims.

Claim Objections

Claim 41 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, the limitation of the bio-compatible material as an opaque material is already set forth in claim 37 from which claim 41 depends.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 8-9, 16, 23-24, 26, 30-31, 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Plesko.

Plesko reads on these claims by disclosing the limitations therein including the following: an ophthalmic device configured to be applied to an eye of a patient (column 11, lines 37-42 re for use in eyeglasses) comprising an optic configured to scatter light (Figures 8c and 8d, column 6, line 61 to column 7, line 3); whereby the depth of focus is increased (column 6, line 61 to column 7, line 3). Since the lens of Plesko is scattering all "unwanted light" then this would inherently include the scattering of diverging light. Any material will inherently comprise particles and therefore will inherently "comprise a

set of particles". The scattering optic of Plesko will inherently be within the range of 1 to 8 mm, this being reasonably based upon Plesko disclosing the device for use in eyeglasses, based upon what is disclosed in Figures 8c and 8d, as well as based upon the large range claimed (1 to 8mm). Plesko further discloses the optic comprising a material having varying degrees of opacity (column 6, line 61 to column 7, line 3 with the central portion as opaque and other portions as non-opaque and together they provide "varying degrees of opacity").

Claims 1-2, 4, 6-11, 13, 16-18, 20, 23-24, 26-27, 29-34, 37-39, 41, 43, 44, 46, 48-52, 54-57, 59-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Achatz et al.

Achatz et al reads on these claims by disclosing the limitations therein including the following: an ophthalmic device configured to be applied to an eye of a patient (abstract) comprising an optic configured to scatter light (column 2, line 57 i.e. if scatter circles are being formed on the retina by the lens then the lens and aperture are inherently configured to scatter light); whereby the depth of focus is increased (column 2, line 51). Since the lens of Achatz et al is scattering light passing through the optic to the eye, then this will inherently include the scattering of diverging light passing through the optic to the eye. Achatz et al further discloses an aperture, and particularly a pin-hole aperture in the center of the lens (column 2, lines 51-59). Any material will inherently comprise particles and therefore will inherently "comprise a set of particles". Achatz et al further discloses the aperture diameter within the claimed range of claim 6 (column 2, line 55). The scattering optic of Achatz et al will inherently be within the

range of 1 to 8 mm, this being reasonably based upon Achatz et al disclosing the device for use in an intraocular lens (abstract) and based upon the large range claimed (1 to 8mm). Achatz et al further discloses the optic comprising a material having varying degrees of opacity (claim 17 re "partially opaque"). The lens of Achatz et al will inherently comprise a bio-compatible material and a non-dissolving material, this being reasonably based upon Achatz et al disclosing the lens for use as an intraocular lens.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10-14, 17-20, 22, 32-39, 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plesko in view of Michael.

Plesko discloses as is set forth above but does not specifically disclose the ophthalmic device or optic being formed of a bio-compatible material, specifically polymethylmethacrylate. Michael teaches that an ophthalmic lens formed for use in eyeglasses can be formed of a bio-compatible material, specifically polymethylmethacrylate, for the purpose of providing an eyeglass lens that can be easily and inexpensively manufactured (column 2, line 1, claim 11). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the ophthalmic device or optic of Plesko being formed of a bio-compatible material, specifically polymethylmethacrylate since Michael teaches that an ophthalmic

lens formed for use in eyeglasses can be formed of a bio-compatible material, specifically polymethylmethacrylate, for the purpose of providing an eyeglass lens that can be easily and inexpensively manufactured.

Claims 12, 14, 19, 22, 35-36, 42, 53 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achatz et al in view of Goldberg et al.

In reference to these claims, Achatz et al discloses the lens being used for an intraocular lens (abstract) but does not specifically disclose the intraocular lens formed of a PMMA material. Goldberg et al teaches that an intraocular lens can be formed of PMMA material for the purpose of providing an intraocular lens of improved optical qualities and resistance to biodegradation (column 2, lines 13-30). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the intraocular lens of Achatz et al as formed of a PMMA material since Goldberg et al teaches that intraocular lens can be formed of PMMA material for the purpose of providing an intraocular lens of improved optical qualities and resistance to biodegradation.

Claims 15, 21, 40, are rejected under 35 U.S.C. 103(a) as being unpatentable over Achatz et al in view of Anton et al.

In reference to these claims, Achatz et al discloses the lens being used for an intraocular lens (abstract) but does not specifically disclose the intraocular lens formed of a medical polymer material. Anton et al teaches that intraocular lens can be formed of a medical polymer material for the purpose of providing a lens of improved manufacturing and greater oxygen permeability (column 5, lines 64-68, column 6, line

20, column 11, lines 40-48). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the intraocular lens of Achatz et al as formed of a medical polymer material since Anton et al teaches that intraocular lens can be formed of a medical polymer material for the purpose of providing a lens of improved manufacturing and greater oxygen permeability.

Claims 5, 28 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achatz et al in view of Atebara et al.

In reference to these claims, Achatz et al discloses as is set forth above but does not disclose the aperture including an optical power for vision correction. Atebara et al teaches that in an intraocular lens using a pin-hole aperture in its central portion similar to that of Achatz et al (Atebara et al, column 2, line 57 to column 3, line 11), that it is desirable to have the central pinhole aperture as including an optical power for the purpose of providing the lens with an additional optical correction (column 4, lines 47-62). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the intraocular lens of Achatz et al as having the aperture with an optical power for vision correction since Atebara et al teaches that in an intraocular lens using a pin-hole aperture in its central portion similar to that of Achatz et al, that it is desirable to have the central pinhole aperture as including an optical power for the purpose of providing the lens with an additional optical correction.

Claims 44, 46, 48-49, 51-52, and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neefe patent number 4,701,038 in view of Neefe patent number 4,639,105.

Neefe'038 discloses the limitations therein including the following: an ophthalmic lens (abstract) comprising an optic in the lens body configured to produce light scattering (column 2, lines 16-37 in that the light reflecting particles producing the coloring effects through light scattering). Any material will inherently comprise particles and therefore will inherently "comprise a set of particles". The scattering optic of Neefe'038 will inherently be within the range of 1 to 8 mm, this being reasonably based upon Neefe'038 disclosing the scattering being produced by particles dispersed throughout the lens as well as being based upon the large range claimed (1 to 8mm). The lens of Neefe'038 et al will inherently comprise a bio-compatible material and a non-dissolving material, this being reasonably based upon Neefe'038 disclosing the lens for use as a contact lens (abstract). Neefe'038 discloses as is set forth above including the particulate matter for coloring surround a central circular portion (Figure 4, column 3, lines 17-33) but does not disclose the central circular portion as a pin-hole like aperture. Neefe'105 teaches that in a contact lens having particulate matter for coloring surround a central circular portion similar to Neefe'038 (Neefe'105, Figure 1, column 3, line 29 to column 4, line 12), that it is further desirable to have the central circular area as a pinhole-like aperture for the purpose of preventing hypoxia and the formation of edema (Figure 1, column 3, lines 3-15). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the central circular portion of the lens of Neefe'038 as being a pin-hole like aperture, since Neefe'105 teaches that in a contact lens having particulate matter for coloring surround a central circular portion similar to Neefe'038, that it is further

desirable to have the central circular area as a pinhole-like aperture for the purpose of preventing hypoxia and the formation of edema.

Allowable Subject Matter

Claims 3, 25, 45, and 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with respect to claim 3, none of the prior art either alone or in combination disclose or teach of the claimed ophthalmic device comprising an optic configured to scatter diverging light reaching the optic, whereby the depth of focus is increased, and specifically including, as the distinguishing feature in combination with the other limitations, the claimed optic configured to forward scatter substantially parallel light reaching the optic and back scatter diverging light reaching the optic. Specifically, with respect to claim 25, none of the prior art either alone or in combination disclose or teach of the claimed method of increasing the depth of focus of an eye of a patient, comprising providing an ophthalmic device comprising an optic configured to scatter diverging light reaching the optic, and specifically including, as the distinguishing feature in combination with the other limitations, the claimed optic configured to forward scatter substantially parallel light reaching the optic and back scatter diverging light reaching the optic. Specifically, with respect to claim 45

and 61, none of the prior art either alone or in combination disclose or teach of the claimed ophthalmic lens or method of increasing depth of focus comprising an optic configured to produce light scattering, a pinhole-like aperture substantially in the center of the optic, and specifically including, as the distinguishing feature in combination with the other limitations, the claimed optic configured to forward scatter substantially parallel light reaching the optic and back scatter diverging light reaching the optic.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday(8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jordan M. Schwartz
Primary Examiner
Art Unit 2873
June 21, 2004